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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/683,298	12/11/2001	John A. Richards	3421.1	1430

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EXAMINER	
TRAN, MY CHAU T	
ART UNIT	**PAPER NUMBER**
1639	

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/683,298	RICHARDS, JOHN A.	
	Examiner	Art Unit	
	MY-CHAU T TRAN	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 May 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 May 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1. Applicant's amendment filed 5/28/2004 is acknowledged and entered. Claims 1-4, and 23-33 have been canceled. Claims 5, 10, 12, 14-16, 19, and 22 have been amended.

2. Claims 5-22 are pending.

Maintained Rejections

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 5-6, 10-13, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ackley et al. (US Patent 5,733,509).

Ackley et al. disclose a system for synthesizing an array of oligonucleotides probes on a substrate (col. 1, lines 7-9). The system comprises of a plurality of dispensing heads (plurality of deposit elements), a first dispensing bar (second mounting assembly), a second dispensing bar (third mounting assembly) (col. 2, lines 30-39), and a positioning mechanism (first mounting assembly) (col. 3, lines 35-49) (refers to claims 5 and 22). The dispensing head deposit a control volume of nucleotides bases to a location on the substrate (col. 3, line 5-10) (refers to claim 6). The substrate is a planar shape (col. 2, lines 9-15), and is placed on a loading station (col. 4, lines 16-23) (refers to claims 10-13). Therefore, the system of Ackley et al. anticipates the presently claimed apparatus.

5. Claims 5-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Brown et al. (US Patent 5,807,522).

Brown et al. disclosed an apparatus for fabricates microarrays of biological samples on a solid support (col. 1, lines 15-19; col. 3, lines 52-58; col. 9, lines 53-56). The apparatus comprises a dispenser device that comprises a plurality of dispensers (col. 4, lines 12-15; fig. 1, ref. #10) (a plurality of deposit elements; refers to claim 6), which are carried on the arm (refers to claim 9), and a structure (first mounting assembly) that move the dispenser toward and away from the support surface (first axis perpendicular to the depositing surface) (col. 7, lines 17-30). The apparatus also comprises a positioning support that moves the dispenser device along the x-y axes (col. 3, lines 59-65; col. 10, lines 7-50) (refers to claim 7) wherein the positioning support comprises a displacement assembly (second mounting assembly) that move the dispenser device along the x-axis (second axis) (col. 10, lines 7-28, fig. 4, ref. #80, 82, 84, & 86) and a structure (third mounting assembly) that move the dispenser device along the y-axis (third axis) (col. 10, lines 29-50; fig. 4, ref. #90, 92, 94, 96, & 98). The displacement assembly has two modes wherein in one mode the assembly function to move the dispenser in x-axis increments and the second mode is to move the dispenser unit in x-axis increments for positioning (col. 10, lines 22-28). The structure has two modes wherein in one mode the assembly function to move the dispenser in y-axis increments and the second mode is to move the dispenser unit in y-axis increments for positioning (col. 10, lines 41-46). Further, the apparatus comprises a holder that holds a plurality of supports (col. 10, lines 51-53; fig. 4, ref. #102). The support comprises a

glass slide (col. 4, lines 25-26) (refers to claims 10-13). Therefore, the apparatus of Brown et al. anticipates the presently claimed device.

6. Claims 5-12, and 14-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang (US Patent 6,511,849 B1).

Wang discloses an apparatus for forming a microarray of biological materials on a substrate (col. 2, lines 2-3; fig. 1). The apparatus comprises a platform (ref. #14) (holding element), a first linear guide (ref. #2) (second mounting assembly), a second linear guide (ref. #3) (third mounting assembly), and a third linear guide (ref. #4) (first mounting assembly) (col. 3, lines 24-65; figures 1-2). The third linear guide is perpendicular to the first linear guide and second linear guide (col. 3, lines 55-58; figures 1-2) (first axis). The first linear guide is perpendicular to the second linear guide (fig. 2) (refers to claim 7). The third linear guide is attached to a sampling manifold (ref. #9), which contains four sampling needles (ref. #8) (col. 4, lines 4-16; fig. 3) (plurality of deposit elements; refers to claim 6). The platform holds a series of substrates (ref. #12) (col. 3, line 39). In operation, the substrates are placed on the platform that is mounted on the first linear guide, which move into position for the sampling manifold to dispense the sample onto the substrate (col. 4, lines 53-67). The sampling manifold is attached to the third linear guide that lower the manifold to the substrate in order for the sampling manifold to dispense the sample onto the substrate. Therefore the apparatus of Wang anticipates the presently claimed apparatus.

7. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Roach et al. (US Patent 5,770,151).

Roach et al. disclose an apparatus for depositing biological molecules on a substrate to form a microspot array (col. 1, lines 5-9; fig. 1). The apparatus comprises of a capillary member (ref. #10) (biological deposit element), a pod (ref. #14) (first mounting assembly), an arm (ref. #16) (second mounting assembly), and a cross member (ref. #18) (third mounting assembly) (col. 3, lines 41-54; fig. 1). The pod facilitates the capillary member movement in the Z direction (first axis), the pod and arm facilitates the capillary member movement in the X direction (second axis), and the pod and the cross member facilitates the capillary member movement in the Y direction (third axis). Therefore, the apparatus of Roach et al. anticipates the presently claimed apparatus.

Withdrawn Objections and /or Rejections

8. The rejections of claims 15, 20, and 21 under 35 USC 112, second paragraph, for the term "yaw" has been withdrawn in light of applicant's arguments, see page 7, line 3-4, i.e. *"Applicant assert that the ordinary meaning is broader and also includes a reference plane defined by rotation about an axis."*

9. The rejections of claims 19 under 35 USC 112, second paragraph, for the term "gantry" has been withdrawn in light of applicant's arguments, see pg. 9, line 5-6, i.e. "*Applicant respectfully assert that the ordinary meaning is broader and also includes a "support framework for machinery".*"

10. The rejection of claims 5-6, 10-12, and 22 under 35 USC 102(b) as being anticipated by Hayes et al. (US Patent 5,658,802) has been withdrawn in light of applicant's arguments that Hayes et al. does not teach a first mounting assembly to enable movement of the deposit elements around a first axis perpendicular to the depositing surface.

Response to Arguments

11. Applicant's argument directed to the rejection under 35 USC 102(b) as being anticipated by Ackley et al. (US Patent 5,733,509) for claims 5-6, 10-13, and 22 was considered but they are not persuasive for the following reasons.

Applicant argues that the apparatus of Ackley et al. do not teach the presently claimed apparatus because Ackley et al. do not describe rotational movement of elements **around an axis** but rather teaches linear movement of elements for printing operations. Thus the apparatus of Ackley et al. do not teach the presently claimed apparatus.

Applicant's arguments are not convincing since the apparatus of Ackley et al. do teach the presently claimed apparatus.

First, the term "around" is not define or exemplified by the specification and the broadest interpretation are being apply to this term wherein the Webster's Dictionary define "around" for example as in or toward the opposite direction, position, or attitude. Thus the presently claimed apparatus does not exclude the "linear movement of element" and Ackley et al. do describe linear movement of elements (see e.g. col. 2, lines 30-39; col. 3, lines 35-49).

Second, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e.,

rotational movement such as roll direction of fig. 5 and paragraph [0047]; pitch direction of fig. 7 and paragraph [0048]) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Third, the apparatus of Ackley et al. teach all the structural elements of the presently claimed apparatus, i.e. a plurality of deposit elements, a first mounting assembly perpendicular to the first axis of the depositing surface, a second mounting assembly parallel to the second axis of the depositing surface, and a third mounting assembly parallel to the third axis of the depositing surface, (see e.g. col. 2, lines 30-39; col. 3, lines 35-49). The limitation of "*to enable movement of the deposit elements around*" is a functional limitation. The claimed apparatus must be distinguished from the prior art in terms of structure rather than function (see MPEP 2114). MPEP 2114 states that:

> >While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re* Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); < *In re* Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Thus the apparatus of Ackley et al. do teach the presently claimed apparatus and the rejection is maintained.

12. Applicant's argument directed to the rejection under 35 USC 102(b) as being anticipated by Brown et al. (US Patent 5,807,522) for claims 5-22 was considered but they are not persuasive for the following reasons.

Applicant alleges that the apparatus of Brown et al. do not teach the presently claimed apparatus because Brown et al. do not describe rotational movement of elements **around an axis** but rather teaches linear movement of elements for printing operations. Thus the apparatus of Brown et al. do not teach the presently claimed apparatus.

Applicant's arguments are not convincing since the apparatus of Brown et al. do teach the presently claimed apparatus.

First, the term "around" is not define or exemplified by the specification and the broadest interpretation are being apply to this term wherein the Webster's Dictionary define "around" for example as in or toward the opposite direction, position, or attitude. Thus the presently claimed apparatus does not exclude the "linear movement of element" and Brown et al. do describe linear movement of elements (see e.g. col. 10, lines 7-50; col. 11, lines 4-20).

Second, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., rotational movement such as roll direction of fig. 5 and paragraph [0047]; pitch direction of fig. 7 and paragraph [0048]) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Third, the apparatus of Brown et al. teach all the structural elements of the presently claimed apparatus, i.e. a plurality of deposit elements, a first mounting assembly perpendicular to

the first axis of the depositing surface, a second mounting assembly parallel to the second axis of the depositing surface, and a third mounting assembly parallel to the third axis of the depositing surface, (see e.g. col. 3, lines 59-65; col. 4, lines 12-15; col. 7, lines 17-30; col. 10, lines 7-50). The limitation of "*to enable movement of the deposit elements around*" is a functional limitation. The claimed apparatus must be distinguished from the prior art in terms of structure rather than function (see MPEP 2114). MPEP 2114 states that:

> >While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re* Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); < *In re* Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Thus the apparatus of Brown et al. do teach the presently claimed apparatus and the rejection is maintained.

13. Applicant's argument directed to the rejection under 35 USC 102(e) as being anticipated by Wang (US Patent 6,511,849 B1) for claims 5-12, and 14-22 was considered but they are not persuasive for the following reasons.

Applicant contends that the apparatus of Wang does not teach the presently claimed apparatus because Wang do not describe rotational movement of elements **around an axis** but rather teaches linear movement of elements for printing operations. Thus the apparatus of Wang does not teach the presently claimed apparatus.

Applicant's arguments are not convincing since the apparatus of Wang does teach the presently claimed apparatus.

First, the term "around" is not define or exemplified by the specification and the broadest interpretation are being apply to this term wherein the Webster's Dictionary define "around" for example as in or toward the opposite direction, position, or attitude. Thus the presently claimed apparatus does not exclude the "linear movement of element" and Wang do describe linear movement of elements (see e.g. col. 4, lines 53-67).

Second, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., rotational movement such as roll direction of fig. 5 and paragraph [0047]; pitch direction of fig. 7 and paragraph [0048]) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Third, the apparatus of Wang teaches all the structural elements of the presently claimed apparatus, i.e. a plurality of deposit elements, a first mounting assembly perpendicular to the first axis of the depositing surface, a second mounting assembly parallel to the second axis of the depositing surface, and a third mounting assembly parallel to the third axis of the depositing surface, (see e.g. col. 3, lines 24-65, and lines 55-58; figures 1-2; col. 4, lines 4-16; fig. 3). The limitation of "*to enable movement of the deposit elements around*" is a functional limitation. The claimed apparatus must be distinguished from the prior art in terms of structure rather than function (see MPEP 2114). MPEP 2114 states that:

> >While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of

> structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re* Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); < *In re* Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Thus the apparatus of Wang does teach the presently claimed apparatus and the rejection is maintained.

14. Applicant's argument directed to the rejection under 35 USC 102(b) as being anticipated by Roach et al. (US Patent 5,770,151) for claim 22 was considered but they are not persuasive for the following reasons.

Applicant alleges that the apparatus of Roach et al. do not teach the presently claimed apparatus because Roach et al. do not describe rotational movement of elements **around an axis** but rather teaches linear movement of elements for printing operations. Thus the apparatus of Roach et al. do not teach the presently claimed apparatus.

Applicant's arguments are not convincing since the apparatus of Roach et al. do teach the presently claimed apparatus.

First, the term "around" is not define or exemplified by the specification and the broadest interpretation are being apply to this term wherein the Webster's Dictionary define "around" for example as in or toward the opposite direction, position, or attitude. Thus the presently claimed apparatus does not exclude the "linear movement of element" and Roach et al. do describe linear movement of elements (see e.g. col. 3, lines 45-54).

Second, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., rotational movement such as roll direction of fig. 5 and paragraph [0047]; pitch direction of fig. 7 and paragraph [0048]) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Third, the apparatus of Roach et al. teach all the structural elements of the presently claimed apparatus, i.e. a plurality of deposit elements, a first mounting assembly perpendicular to the first axis of the depositing surface, a second mounting assembly parallel to the second axis of the depositing surface, and a third mounting assembly parallel to the third axis of the depositing surface, (see e.g. col. 3, lines 41-54; fig. 1). The limitation of "*to enable movement of the deposit elements around*" is a functional limitation. The claimed apparatus must be distinguished from the prior art in terms of structure rather than function (see MPEP 2114). MPEP 2114 states that:

> >While features of an apparatus may be recited either structurally or functionally, claims< directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. >In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997) (The absence of a disclosure in a prior art reference relating to function did not defeat the Board's finding of anticipation of claimed apparatus because the limitations at issue were found to be inherent in the prior art reference); see also *In re* Swinehart, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971); < *In re* Danly, 263 F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959). "[A]pparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original).

Thus the apparatus of Roach et al. do teach the presently claimed apparatus and the rejection is maintained.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T TRAN whose telephone number is 571-272-0810. The examiner can normally be reached on Mon.: 8:00-2:30; Tues.-Thurs.: 7:30-5:00; Fri.: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDREW WANG can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mct
September 12, 2004

PADMASHRI PONNALURI
PRIMARY EXAMINER